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ABSTRACT

A project was undertaken at the State University of New York, Agricultural and Technical College, Delhi Campus, to implement an accessible, minimum computer capability to support intensive curriculum and staff development activities which would update faculty, programs, and courses in the practical applications of computer technology. To accomplish this, objectives and activities were identified in four primary areas: (1) to acquire the necessary computer hardware to establish a readily accessible academic computing capability; (2) to prepare and involve faculty, initially a core group, in the use of computing in instruction with an emphasis on instructional demonstration and practical applications; (3) to conduct curriculum development activities to incorporate computer appreciation, literacy, and competence into the college's programs and courses; and (4) to design, implement, and promote an organized set of academic computing services to support the educational needs and interests of students and faculty (e.g., instructional development, computer-managed instruction, in-service workshops, orientations, publications, library support materials, microcomputer loan program, repair and maintenance). This report describes the accomplishments of the Delhi Campus with respect to these objectives and includes descriptions of the in-service workshops, a list of math and science courses, a list of computer applications by course, instruments for the Learning Resources Survey and student survey on academic computing, a program and evaluation of a dissemination conference, and project consultant summaries. (AYC)

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FINAL REPORT

National Science Foundation

Comprehensive Assistance to Undergraduate Science Education (CAUSE)

PROJECT SER - 8103864

A Comprehensive Program for Computer Related Instruction at the State University of New York Agricultural and Technical College Delhi, New York

Mark S. Peel
Project Director
September, 1984

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Introduction

The NSF project's central purpose was to implement an accessible, minimum computer capability to support intensive curriculum and staff development activities which would update faculty, programs, and courses in the practical applications of computer technology. To accomplish this, objectives and activities were identified in four primary areas: hardware/software development, staff development, curriculum development, and academic computing services development. The objectives of each of these follows together with the evaluative information and analysis to describe the College's progress.

Hardware/Software Development

In the fall 1980, the College's computer hardware included an IBM 360 Model 20 with 12K of main memory used to support both administrative and academic needs through card-based files and batch processing; and two 2741 IBM APL terminals accessible to SUNY Binghamton. The College's Management Division also maintained an IBM 5110 microcomputer in its accounting lab. The first objective of the College's academic computing plan was the following:

> To acquire the necessary computer hardware to establish a readily accessible academic computing capability.

The original hardware plan incorporated four basic concepts:

1. A central computer capability to support the need for readily accessible terminals, primarily for student use outside the classroom or laboratory;

2. a decentralized capability to support laboratory needs for demonstration and simulation using specialized computer hardware, as well as to provide convenient access for curriculum development and research by faculty;

3. a portable capability to enable faculty and staff to use computers in general classrooms, offices, and at home;

4. and an external capability to provide faculty and students software and programming languages not otherwise supported by resident campus computers.

The heart of the campus academic computer plan and the NSF project was the commitment of the College to provide a new campus mainframe for academic as well as administrative computing. All hardware acquisition has been completed.

In November, 1981, the College's new mainframe--a Burrough's B-1955--was installed. This machine consisted of 750K main memory with both disk and tape storage media. At this writing, the College is preparing to install a new Burrough's mainframe with six megabytes of main memory.

Concurrent with the installation of the Burrough's B-1955 mainframe, the College engaged the services of an external consultant to assist in the selection of an appropriate central computer facility. By January, 1982, a large room on the second floor of the college library was selected and occupied. In September, 1982, the Academic Computing Lab was opened for faculty and student use. The facility included sixteen terminals, two DECwriter terminals used as slave printers, and two Texas Instruments APL terminals linked to SUNY Binghamton. In an adjacent room, the lab provided four IBM key-punch machines.

Two major additional acquisitions represent modifications to the initial plan for the central lab. The first acquisition involved a 20-megabyte Corvus Winchester disk system to which multiple micros were attached. This system has been used primarily to support both faculty produced and commercial software for multiple, simultaneous student users. The NSF grant funded this purchase with OPAS approval, completely from savings in the original equipment list. The second was the purchase and installation of a Zilog 8000 super-microcomputer, a multi-use UNIX-based system to provide a mainframe-independent and more cost-effective capability for computer science and engineering student computing. NSF grant funds were matched by the College's Foundation. The OPAS committee also approved this purchase.

The decentralized computer capability has been implemented through the combined support of NSF, VEA, and state sources. NSF funds supported the purchase of a Tektronix 4054 graphics plotting system, an industry quality graphics plotter, used to support Engineering Science and technical program students. This machine is located in the new dedicated computer room in the Engineering Technologies building. The NSF project also funded seven Apple II Plus systems with disk drives and two printers for the dedicated math lab in Evenden Tower. VEA has supported the purchase of a WANG 125A word processing system with four work stations for the Secretarial Science Model Office and the purchase of eight Apple II Plus systems for use by faculty in technical programs. State funds have

purchased specialized computer-based equipment for numerical control and robotics simulations and two additional word processing stations.

An important objective of the decentralized capability is to provide computer access to faculty in each of the major instructional buildings on campus. By March, 1983, single CRT terminals were installed in Smith Hall, Farnsworth Hall, and Evenden Tower.

The academic computing plan's original concept for portable capability involves two separate hardware programs. The first is a loan program which provides Apple II Plus systems in convenient carrying cases for faculty and academic staff use for two-week renewable periods. This program permits the borrower to develop instructional materials or learn a programming language in the privacy of his or her office or home. Since the establishment of the program in January, 1983, the three microcomputer systems have been on constant loan and are typically scheduled for several weeks into the future.

The second means of portable capability consists of Apple II Plus systems on mobile carts. The College has purchased mobile carts for one system to be available in each of the three major instructional buildings on campus. The systems have 25-inch color video monitors which are most useful for classroom demonstrations. These original systems are now being upgraded to Apple IIe machines with printers.

The final basic hardware concept--external access--is represented by the two APL terminals already to earlier. These terminals

were upgraded by the College early in the project using state funds. Specifically, they provide support for APL, a language not supported by any campus computer, and software libraries which include statistical packages not available at Delhi.

In summary, the initial hardware objectives of the NSF project have been successfully implemented. In the time since the development of the initial plan and the installation of the College's new mainframe, new planning based upon accummulating experience and technological advances has proceeded. At present, planning is under way which will involve new hardware acquisitions as well as refine the current utilization of existing computer hardware for academic purposes.

Staff Development

The second major objective of the NSF project was:

> To prepare and involve faculty, initially a core group, in the use of computing in instruction with an emphasis on instructional demonstration and practical applications.

Prior to 1980 academic computer activities on the Delhi campus fell into three basic categories:

1. instructional usage to manage student information or determine modes of learning;
2. course assignments involving the submission of prepared data or programs to the computer center;
3. classroom lecture material related to applications in a career field or discipline.

Of full-time faculty surveyed at the time, 48.8 percent had used one or more of these services or activities to support instruction.

Three of four, however, had used one or more of the non-instructional management services including test scoring, performance evaluation, or cognitive style mapping. Only one in four had actually given an assignment involving students in computing, and only one in seven offered some exposure to computer applications within course content. It was obvious from these survey results that academic computing was being innibited not only by the lack of available hardware but also by the lack of appropriate training of faculty and other academic staff. The 1979 study titled "Computer Literacy: A Technological Imperative at Delhi" described the historical efforts extending over the previous decade aimed at preparing faculty to use computers in their courses. These efforts for all intents and purposes had a minimum impact because they either dealt with theoretical aspects of computing or concentrated faculty attention on learning a programming language as a prerequisite.

In an independent project conducted prior to the development of the Academic Computing Plan, a college faculty member determined that the faculty in general would be influenced to adopt new methods of instruction in curriculum revision by a reduced course load and by their own personal satisfaction derived from such changes. Other factors were the availability of travel funds, attendence at workshops, recognition of work accomplished as a result of changes, and merit raises.

The NSF grant proposal sought to incorporate as many of these factors as possible. For example, the NSF project included $4,000

for core faculty travel and participation at workshops. It also provided this select, representative group of faculty release time each semester of the project and a $1,200 stipend for one month's work each of the first two years of the project. These faculty were expected to participate in specially designed workshops and were accorded recognition for their accomplishments by means of merit raises and campus media. The purpose of the core group was to participate in the initial training and curriculum activities and later disseminate their experience and accomplishments to colleagues in campuswide computer workshops and through academic computing services.

Staff development activities and support included NSF grant travel, the College's program of professional development grants, and the program of in-service workshops.

NSF travel funds were used to support ten trips by the NSF core faculty. These trips involved attendance at computer-related conferences, visits to other institutions for computer research, and the presentation of papers at conferences. Table 1 lists the institutions and conferences supported by these travel funds.

Table I

NSF Supported Professional Development Travel

Location	Purpose	No. Of Faculty
White Plains, NY	Queue Software Show	2
Clearwater Beach, FL	Fourth Annual Institute on the Teaching of Psychology to Undergraduates	1
Atlanta, GA	Applying New Technology in Higher Education Conference	1
Toronto, Canada	National Council of Teachers of Mathematics	1
Freehold, NY	N.Y.S. Mathematics Association Conference	1
Hanover, NH	Dartmouth College Guests of NSF Consultant	6
Hanover, NH	Dartmouth College Computer Science Education Innovations and Trends	1
Utica, NY	N.Y.S. Mathematics Association	1
Baltimore MD	National Educational Computing Conference	4
Philadelphia, PA	ACM Annual Conference	1

Between June 1981 and June 1984, fifteen computer related workshops were developed and conducted. Table II identifies those workshops and the dates they were offered. In all, over 100 of the current academic staff (of approximately 160) have taken at least one workshop and more than half that number have taken two or more. These data represent a significant level of participation on a voluntary basis in the training activities designed and promoted under NSF project auspices. Appendix A contains the listing of workshops and their descriptions.

It is most noteworthy that the first workshop in June 1981 was designed and conducted by an external consultant using rented microcomputers (Introduction to Microcomputers). Just six months later the College's own staff designed and conducted computer workshops. As of January 1984, all computer workshops including those in programming languages were being offered by Delhi College staff.

Also in January 1983 NSF core faculty offered the first of the formal project dissemination activities which included a workshop in the use of the Tektronix Graphics Plotter and twenty-one individual demonstrations of computer applications and techniques. NSF consultants also contributed during these workshop periods with presentations on topics including the Electronic Campus, Future Trends in Computing, Computers in Laboratories, and Interaction Between Computers and T.V.

Table II

In-Service Computer Workshops
1981-1984

	6/81	1/82	6/82	1/83	6/83	1/84	6/84
Grant Restricted							
Introduction to Microcomputers	X						
Microcomputer Workshop: Developing Instruction and Applications		X					
Introduction to Interactive Academic Computing		X					
Academic Computing: Curriculum Development for Math & Science		X					
General							
Introduction to Microcomputers		X	X	X			
Advanced Workshop in Microcomputer Applications			X	X	X	X	
Introduction to Interactive Academic Computing		X	X		X	X	
Introduction to Word Processing and WP Equipment		X	X				
Introduction to the Tektronix 4054				X	X		
Introduction to BASIC Programming				X	X		
Fortran 77 Programming					X		
Introduction to Pascal Programming					X		
Graphics on the Tektronix System					X		
Elementary Word Processing on the Microcomputer						X	
Introduction to Micro-CAD							X

Concurrent with the specified and limited activities of the NSF grant, the College developed an expanded program of professional development grants to support its high priority on computer training. From September 1980 to June 1984, a total of twenty one separate grants were awarded to thirty-eight faculty and academic staff. Table III is a list of grant awards. Funded proposals included attendance or participation at computer conferences, tuition assistance for computer courses, faculty research in the use of computers, a College sponsored seminar, and the purchase of software. This program does not include the institution's tuition waiver support which has been used by several faculty to take computer courses. A total of $10,368 support has been awarded through professional development grants with an average individual award of $273.

Another indication of the College's commitment to staff development in the use of computers is the number of leaves pertaining to computers which have been approved in recent years. Of fifteen sabbatics and other leaves with pay approved for the 1981-82, 1982-83, and 1983-84 academic years, eight have involved a substantial computer objective. Sabbatics were awarded to faculty to study computer aided design (CAD) at IBM in North Carolina, to study academic computer applications in the social sciences, and to assume the responsibilities of the computer instructional developer of the NSF grant. Other leaves with pay were for the purposes of continuing as the computer instructional developer and to study mainstream computing in education and trends in industry. The College also approved support for two faculty sabbatics to complete masters degree requirements in computer systems and science.

Table III

Professional Development Grants
1980--1984

YEAR/ACTIVITY	PARTICIPANTS	COST
1980-1981		
Data Pro Word Processing Seminar	1 faculty and 1 technical assistant	$ 525
National Educational Computing Conference	4 faculty	1,620
Word Processing Seminar (Delhi)	1 consultant	234
SUNY Binghamton Computer Courses	3 faculty	180
CAD/CAM Seminar (SUNY Alfred)	2 faculty	108
Computer Literacy Conference (RIT)	5 faculty	315
Computer Graphics Seminar (RPI)	2 faculty	500
1981-1982		
Robot Applications/Training Program	1 faculty	395
Cornell Restaurant Administration Simulation	1 faculty	255
Pilot Study of the Potential Role for Microcomputers in the Continuing Education of Medical and Paramedical Personnel in a Remote Rural Setting	1 faculty	400
Computers/Microprocessers in Refrigeration Conference	2 faculty	455
Programmed Learning Course in Digital Electronics	3 faculty	1,300
1982-1983		
Apple Level I Repair Training	1 technical assistant	230
Computers in Nursing Service Workshop	1 faculty	494
Purchase CRASE software		500
Trip to investigate use of microcomputers for developmental studies	2 faculty	107
Office Automation Conference	3 faculty	1,075
Math Retraining for Computer Science	1 faculty	500
1983-1984		
Electrical Engineered Systems Basic Training Course	1 faculty	300
Agricultural Software	1 faculty	475
Annual Robotic Education/ Training Conference	1 faculty	400
		$10,368

The evidence of faculty participation in the varied staff development activities is considerable. It is reasonable to conclude that the wide range of activities including workshops, travel support, grants, and leaves offered something to each professional academic staff member on a generally supportive, non-threatening basis. In summary, the College's highly publicized and widely articulated high priority on academic computing was in large measure embraced and advanced through participation in these activities.

Curriculum Development

The third objective of the academic computing plan was:

> To conduct curriculum development activities to incorporate computer appreciation, literacy, and competence into the College's programs and courses.

During the 1978-79 academic year, only two of approximately 300 courses offered by the College contained significant computing exposure for students. One course was Computer Methods, a course required or elected by engineering students, which enrolled fifty-nine. The other was a business course, Principles of Data Processing, taken by 220 students. Most other academic use was infrequent, trivial, and incidental to course content. The expressed intent of the NSF grant project was to introduce the concepts of computer appreciation, literacy, and competence through existing courses of the College. In one sense this has meant that technical program requirements and electives have been targeted for possible curriculum revision involving the incorporation of computing and/or computer topics; in another sense this has meant a major pilot

effort by core math faculty to study, design, and implement computer exposure in math courses that are taken by almost 2,000 of the degree students at the College. Appendix B contains the listing of science and math courses identified for potential computer incorporation.

NSF science and math core faculty received approximately one course reduced load for the past six semesters to provide released time for curriculum revision activities. In addition a four-week period during the summers of 1982 and 1983 involved this group full time in curriculum development activities.

Instructional Applications

During the spring 1983 semester, twenty-one faculty representing the five instructional divisions assigned computer projects to students to be done in the Academic Computing Lab. Instructional applications included Fortran and BASIC programming, math course assignments, anatomy and physics programs, and engineering problems.

For the 1983-84 academic year, the NSF project staff developed a slide-tape presentation titled, "Academic Computing at Delhi." This media production was designed to provide an orientation to the College's freshman class. A companion computer exercise required each student to visit the Academic Computing Lab and complete an assignment. The packaged presentation was recognized by the SUNY Two-Year College Development Center 1983 Showcase for Excellence Program. Approximately 1,000 students completed the orientation in fall 1983.

By February 1984, NSF project records included over 100 courses (Appendix C) which have established some computer exposure requiring hardware and software support.

As a result of the NSF grant, the mathematics department has gone from essentially no computer use to the following in three years:

1. All of the mathematics faculty use computers in teaching. Five of the seven faculty have written and continue to write their own computer programs in BASIC and Pascal.

2. An extensive library of computer programs used in teaching mathematics has been collected.

3. Approximately 500 students in Statistics, 300 in College Algebra, and 40 in Finite Math use computers for completing out-of-class assignments.

4. In Trigonometry, Precalculus, and Calculus, computers are used to demonstrate many mathematical concepts including: graphing, limits, maximum and minimum, Riemann Integration, parametric equations, volumes of solids of revolution and Newton's Method, thus exposing another 500-600 students per year to computer use.

The mathematics faculty has shifted the emphasis of the grant from teaching computer literacy to using the computer as a tool in teaching and learning mathematics. Hence, computer literacy is a by-product of the current use of computers as a pedagogical tool.

Academic Computing Services Development

The fourth NSF project objective was to:

> Design, implement, and promote an organized set of academic computing services to support the educational needs and interests of students and faculty.

Until the funded project, academic computing services consisted of test scoring and performance evaluation services for faculty batch processing of student jobs and terminal access (two) to SUNY Binghamton. For some years the College had employed a full-time programmer/analyst who was to provide technical assistance to faculty. Frequent

staff turnover in that position and the pressing needs of administrative computing did not permit the development and promotion of services for faculty. The NSF project addressed this need through the establishment of an academic computing service responsibility under the supervision of the Academic Affairs Office. In a cooperative arrangement with the College Computer Center, a programmer/analyst was committed half time to academic computing during the project. This position became a full-time academic assignment at the end of the grant period.

The College also committed the full-time services of a senior science faculty member who fulfilled the responsibilities of the computer instructional developer. This position had two years of grant support and terminated January 1, 1984. In addition the College reassigned an instructional technical assistant from physics to the Academic Computing Lab in December, 1982. This individual was critically needed to provide lab support for the terminal and microcomputer users numbering up to one hundred a day. At the termination of the NSF project in June, 1984, a full-time director of academic computing was assigned to supervise the programmer/analyst and laboratory technical specialist.

Academic computing services are now organized into the following catagories:

1. Instructional Development
2. Computer Managed Instruction
3. In-service Workshops
4. Orientations
5. Publications
6. Library Support Materials

7. Microcomputer Loan Program
8. Repair and Maintenance

Instructional Development

Instructional development services include the assistance of a director of academic computing, a programmer/analyst, and the Academic Computing Lab technical specialist. These services provide faculty and staff consultant and technical services to develop or evaluate software, design instruction and student computer assignments, prepare instructional materials for using the computers, and implement the necessary computer support for student use.

Computer Managed Instruction

The original academic computing services--Test Scoring and Performance Evaluation--continue to be available to assist faculty in the maintenance of classroom records.

In-service Workshops

In January and June each year the College offers in-service workshops for academic staff. Computer offerings have increased in recent years and will continue to be provided to new faculty and staff and those whose interests and abilities are advanced.

Orientations

The NSF Project has developed and promoted orientation materials for faculty and students. An introductory computer exercise was used by the instructional divisions for the first time during the fall of 1982. The purpose of the exercise was to introduce new students to the College's computer support and facilities by

requiring them to visit the Academic Computing Lab and complete an exercise on the mainframe. A microcomputer version of the exercise was developed in 1983-84.

Project staff produced a slide/tape presentation entitled "Academic Computing at Delhi" for use in new student orientations.

Publications

The NSF Project has produced several publications in the past year. Most of these were concerned with guidelines, instructions, and policies related to the proper use of computer hardware. During the summer 1983, the staff compiled documentation and software resources for use in a microcomputer directory. In March 1984, project staff, together with Learning Resources staff, produced the first issue of an occasional newsletter.

Library Support Materials

The NSF Project maintained print materials such as popular journals, newsletters, and microcomputer news weeklys in the project office and Academic Computing Lab. The college library added six new computer periodicals in the last year to its subscription list. The NSF core faculty has recommended materials which will be requested through the library to support computer topics and instruction. The library has also recently added microcomputer software reviews to its Baker and Taylor Approval Program. This service will bring to the faculty's attention new software which can be purchased by the library.

Microcomputer Loan Program

A Microcomputer Loan Program was initiated in 1983 using three Apple II systems with one disk drive each. The program allows faculty and staff to borrow a machine for a two week period. The three machines are usually committed weeks in advance.

Repair and Maintenance

The College has paid for the maintenance contracts on the Burroughs mainframe terminals. Two College technical specialists have received microcomputer repair and maintenance training.

Academic Computing Lab Utilization

The Academic Computing Lab was officially opened in October 1982 with sixteen on-line terminals to the B-1955, two APL terminals to SUNY Binghamton and four key punch machines in an adjacent room. The microcomputer component of the Lab was initiated during the last week of December 1982.

During the first full semester of operation (Spring 1983), 5,198 instructional uses were recorded in the Academic Computing Lab. One year later, that number increased by 3,326 or 65%. Table IV contains use data for the first three semesters of lab operation.

Table IV
Academic Computing Lab Use
Spring 1983 - Spring 1984

	No. of Users	Daily Average Use
Spring 1983	5,198	68.4
Fall 1983	8,280	110.4
Spring 1984	8,524	106.6

Academic Staff Computer Use Survey

Toward the end of the first full semester of Academic Computer Services, a survey was also developed, administered, and analyzed to determine specific academic staff computer uses and recommendations for improvements (Appendix D). Forty-eight (48) or 34% of the staff responded to the survey. The Apple microcomputers represent the hardware most used (60%) with the Burroughs mainframe (24%) and APL terminals (13%) following. Nineteen respondents indicated using software they produced; nine indicated using commercial software. BASIC on the microcomputers and the mainframe is the language most used by academic staff.

Those surveyed were asked to rank the factors which most affected their computer use. The availability of the Apples during the spring 1983 semester was the single most identified support factor (25 of 28 responses). Academic computing staff assistance was identified by sixteen of seventeen respondents as very helpful or helpful. Burroughs response time (10 of 15 responses) and down-time (8 of 10 responses) were identified as hinderances to staff use.

Table V contains the rank order, mean, and standard deviation for staff recommendations to improve academic computing services. In this survey sample, in-service workshops, both introductory and advanced, rank high in importance for academic staff use of computers. User instructions and manuals are, likewise, an important area for continuing support and improvement.

Faculty and other academic staff who responded place campus software and general computer applications information, programming

and lab technical assistance in the next level of importance and need for improvement. Computer downtime and terminal response times were in apparent less need of improvement at the time of the survey.

Table V

Academic Staff Survey

Academic Computing: Areas for Improvement

	Very High Need	Some Need	Low Need	$\bar{X}$	SD
Introductory Workshops (faculty)	21	7	1	2.69	.54
User Instruction/Manuals	17	6	1	2.67	.56
Advanced Applications Workshop	17	6	1	2.67	.57
Information Re: Campus Software	14	10	3	2.41	.69
Software Applications Information	16	9	4	2.41	.73
Programming/Systems Assistance	16	7	5	2.39	.79
Technical Assistance (Lab)	13	8	4	2.36	.76
Division Orientation (student)	10	8	6	2.17	.82
Text Editing (faculty/student)	7	8	4	2.16	.77
Terminal Response Times	11	5	8	2.13	.90
Library Materials	8	7	7	2.05	.82
Computer Down Time	7	6	9	1.91	.87
Weekend Lab Hours	4	12	8	1.83	.70

Academic Computing Student Survey

A student user survey was also developed and administered to determine the adequacy of Academic Computing Services and the need for improvement. Faculty teaching the courses which made the most significant use of computer services during the spring 1983 semester, administered the survey form (Appendix E) to their students late in the spring semester, the first full semester for the new services.

Students were asked to rate the need for improvement of eleven Academic Computing Lab components, listed in Table VI. Student response to each component was tabulated, assigned a weight according to level of need, and the mean and standard deviation were calculated.

Two hundred eighty-nine survey responses were received. Of that group, 67% used the Burroughs terminals; 86% used the Apples; 15% the APL terminals, and 17% the keypunches. Thirty-eight percent (38%) indicated use of the Academic Computing Lab for two or more courses during the semester.

The results listed in order of need in Table VI rate the student orientation to hardware, better terminal response time, terminal and microcomputer availability, and less downtime as areas most needing improvement. Although not supported by a significant statistical difference, user instructions/manuals, proctor assistance in lab, and increased lab hours were less in need of improvement according to student users. Library materials, keypunch availability, and batch processing turnaround time also seem to be less problemmatic for the respondents.

Academic Computing Student Survey

Table VI

Academic Computing Areas for Improvement

	N	Very High Need	Moderate Need	Very Low Need	Mean $\bar{X}$	Standard Deviation
Better Terminal Response Time	253	114	90	49	2.26	.76
Student Hardware Orientation	261	108	112	41	2.26	.71
Apple Availability	255	107	104	44	2.25	.73
Terminal Availability	258	103	112	43	2.23	.72
Less Computer Down Time	245	106	86	53	2.22	.78
Proctor Assistance in Lab	244	87	110	47	2.16	.72
User Instructions/Manuals	262	97	112	53	2.17	.74
More Lab Hours	245	79	81	85	1.98	.82
Library Materials	236	32	83	121	1.62	.71
Quicker Punched Card Processing	211	24	67	120	1.55	.69
Keypunch Availability	214	19	68	127	1.50	.66

Note: Mean and standard deviation calculated on sample using assigned weights: Very High Need = 3; Moderate Need = 2; Very Low Need = 1.

In-service Workshop Evaluation

To determine the effectiveness of the computer in-service workshops, the Office of Academic Affairs developed a five question evaluation form. The first three questions simply ask the participant's agreement or disagreement on the clarity of the workshop objective, success in achieving the objective, and the effectiveness of presentation. The fourth question asks the participant how

interesting the workshop was. The last question, not analyzed here, queries the desirability of future workshops on the same subject.

In June 1982 and January 1983 112 faculty and staff participated in seven of the eight computer workshops offered (one workshop was not evaluated). Of that number 93 or 83% completed workshop evaluation forms. The results show a high consensus of agreement that the seven workshops were effectively designed and conducted. Statistically, the strongest participant conclusion was that the workshops were intellectually stimulating. On the negative side, participants reacted to limited availability of hardware during one of the workshops and the limited scope of another.

Dissemination Conference

On June 11 and 12, 1984, the NSF project sponsored a project dissemination conference in cooperation with Delhi's Office of Continuing Education. The conference was attended by 48 individuals from 25 two-year public and private institutions and proprietary schools. Appendix F includes the conference program and evaluation.

Summary

Delhi's academic computing plan as originally conceived and embodied in the NSF CAUSE project has achieved an extraordinary degree of success. Far beyond the mechanical, albeit difficult, process of acquiring the necessary hardware, the plan's central purpose to move a large group of professionals into a technology and subsequently effect a change in curriculum has been accomplished.

APPENDICES

A. In-service Workshops

B. Math and Science Course Listing

C. List of Computer Applications by Course

D. Learning Resources Survey - Academic Computing

E. Academic Computing Student Survey

F. Dissemination Conference Program and Evaluation

G. Project Consultant Summaries

APPENDIX A

IN-SERVICE COMPUTER WORKSHOPS

Descriptions

Introduction to Microcomputers

The purpose of this workshop is to provide participants a "hands on" experience in the use of microcomputers. The workshop is designed for individuals with little or no knowledge of computng or computer hardware. Apple II microcomputers will be used along with demonstration and application software. Participants will become familiar with this microcomputer's operating system and selected computer terminology.

Advanced Workshop in Microcomputer Applications

This workshop is the second in the microcomputer sequence. Individuals who have taken the introductory workshop or those who have experience with microcomputers are eligible for this workshop. Emphasis will be on the development of software applications, the evaluation of commercial software, and the use of microcomputer applications in instruction. Participants will be required to complete a workshop project.

Introduction to Interactive Academic Computing

This workshop will provide participants an opportunity to learn the use of the College's interactive terminal system. The principles of interactive computing and the features of the Burroughs 1955 will be discussed. The workshop will emphasize participant use of the terminal.

Introduction to Word Processing and Word Processing Equipment

This workshop will introduce participants to the field of word processing, its concepts and applications. Operation of IBM Electronic 75 Typewriter and the Wang Word Processing System will be available to each participant. Participants need not know how to type to use the equipment. An editing project will be required.

Introduction to the Tektronix 4054

This workshop is designed to introduce the concepts of computerized drafting. Participants will be required to produce and revise drawings using Tektronix's system, with the menu driven 2-D software. Participants should be familiar with basic drawing standards; knowledge of programming is not necessary. It is hoped that all persons involved in teaching drawing will avail themselves of this opportunity.

Introduction to BASIC Programming

This workshop is intended to introduce participants to computer programming using the standard BASIC language. The course will include both lecture and lab time. Participants will be required to write several simple programs and a final project program.

Academic Computing: Curriculum Development for Math & Science

NSF Core faculty will spend the week in group and individual activities to examine specific curriculum goals and how academic computing can serve to meet those goals. Course objectives, teaching methods, and student projects will be reviewed and revised with regard to the appropriate adoption of computing.

Fortran 77 Programming

Elementary - This workshop is for those not having prior experience with computers and programming. Participants will be introduced to the concepts of programming through the use of the SRI/Burroughs CANDE system and Fortran 77 programming language. The procedures for input and output, formatting, and data storage will be studied and learned through practice on assigned proglems. Participants will be required to flowchart, code, enter, compile, and execute simple problems.

Advanced - This course will teach participants to write programs in the Fortran 77 coding language. In order to take this course, a participant should be familiar with computer systems and terminology. It is also recommended that students have some prior experience with a computer language. The course will cover methods of input and output with formatting, data structures--including arrays and structured programming of logical operations. It will also cover statistical calculations and sorting routines. Participants will be required to flowchart, code, enter, compile, and execute their own programs on the SRI/Burroughs system using CANDE.

Graphics on the Tektronix System

This workshop is the second in the Tektronix sequence. Individuals who have taken the introductory workshop or those faculty teaching drawing are eligible for this workshop. Emphasis will be placed on developing classroom applications and/or assignments. Participants will be required to do a final project.

Introduction to Pascal Programming

This workshop is intended to introduce participants to computer programming using the Pascal language. Pascal is increasingly important to educators because it is widely taught as the introductory college programming language and is now part of the College Board advanced placement exam. The workshop includes both lecture and lab time. Participants will be required to write several simple programs and a final project program.

Computer Demonstrations for the Classroom

Engineering Problem Solving on the Apple
Data Graphing on the Tektronix
Program Editing Made Easy
Graphics Printing Using the Apple
Computer Menu Programming
Graphics Tablet Demo
Apple Pilot: Authoring Educational Materials
Sign Making Using the Graphics Plotter
Author Teaching Program
Psychology Applications
Future Trends in Computing
Word Processing
Two-Dimensional Drafting
Miscellaneous Liberal Arts Applications
General Ledger
Numerical Problem Solving
Computer Competency Through Mathematics
Job Simulation in Toxicology
Grade Computation
The Future Electronic Campus
Visicalc Made Easy

Elementary Word Processing on the Microcomputer

This workshop will make participants "at home" with writing using a simple word processing program for microcomputers. Each participant will learn to use the program--Bank Street Writer--by completing a workshop project.

Introduction to Micro-CAD

Computer aided design and/or drafting (CAD) is being used increasingly in industry. This workshgopo will introduce participants to the equipment and software which produces computer graphics using microcomputers.

APPENDIX B

BIOLOGY & LIFE SCIENCES

Soil Technology
Soil Fertility
Functional Uses of Plants
Animal Microbiology
Animal Behavior
Introductory Research Animal Technology
Applied Research Animal Technology
Epidemiology & Disease Control
Special Problems in Veterinary Science
Introduction to Plant Science
Plant Propagation
Reproductive Physiology
Equine Anatomy & Physiology
Introduction to Veterinary Science Tech.
Mammalian Anatomy & Physiology
Parasitology
Urinalysis
Diagnostic Microbiology
Physiological Chemistry II
Hematology
Immunohematology
Clinical Chemistry
Physiological Chemistry I
General Microbiology
Genetics
Human Ecology
General Biology I
General Biology II
Botany
Zoology
Human Anatomy & Physiology
Independent Science Study
Field Natural History

SOCIAL SCIENCES

Introductory Macroeconomics
Introductory Microeconomics
Psychology I
Psychology II
Social Psychology
Physics (Atomic)
Child Growth & Development
Introductory Sociology
Marriage & Family
Social Problems
Cultural Anthropology
Physical Anthropology
Individual Study in Social Sciences

ENGINEERING

Statics & Strength of Materials
Structural Theory & Applications
Structural Design & Reinforced Concrete Technology
Analysis & Control of Engineering Materials
Dynamics
Hydraulics & Soil Mechanics
Fluid & Thermodynamic Systems
Electrical Science
Introduction to Engineering Science
Engineering Materials & Methods
Engineering Graphics
Structural Theory & Applications
Statics
Materials Science
Computer Methods
Water & Waste Water Technology

MATH & PHYSICAL SCIENCES

Elementary Algebra
College Algebea
Analytic Geometry & Calculus I
Analytic Geometry & Calculus II
Analytic Geometry & Calculus III
Differential Equations
Finite Math
Math I
Math II
Individual Study Math
Statistics
Pre-Calculus Math
College Math
Applied Calculus
College Chemistry I
College Chemistry II
General Chemistry I
General Chemistry II
General Physics
Physics I (Mech. Sound, Heat)
Physics II (Elec.)
Organic Chemistry I
Analytical Chemistry
Physical Science I
Introduction to Astronomy

APPENDIX C

ACADEMIC COMPUTER PROGRAMS — NOVEMBER 27, 1984

	NUM.	COURSE NAME	PROGRAM NAME	COMMENTS
1.	0000	J.T.P.A.	MATH COMPETENCY	DRILL & PRACTICE ON MATH PROBLEMS
2.	0000	J.T.P.A.	MATH CONCEPTS	DRILL & PRACTICE ON MATH PROBLEMS
3.		INTRO TO MICROCOMPUTING	VISICALC/BANKSTREET	INTRODUCTION TO COMPUTER USE
4.		SUMMERTIME/COMPUTERTIME	VARIOUS	HANDS-ON EXPERIENCE FOR GRADESCHOOL
5.	0399	ALUMNI COLLEGE MICRO COMP	BANK ST. WRITER, ETC	INTRO TO COMPUTING FOR ADULTS
6.	0404	BASIC PROGRAMMING	ASSIGNED	LEARNING 'BASIC' PROGRAMMING
7.	0408	MICROS FOR TEACHERS	VARIOUS	MAKE HS TEACHERS COMPUTER LITERATE
8.	0409	BASIC PROGRAMMING I	ASSIGNMENTS	LEARN 'BASIC' LANGUAGE PROGRAMMING
9.	0410	SPREADSHEET/VISICALC	SPREADSHEET/VISICALC	LEARN TWO SPREADSHEET PROGRAMS
10.	0411	SOFTWARE DEVELOPMENT	VARIOUS	DEVELOP/RECOGNIZE GOOD SOFTWARE
11.	0412	ELECTRONIC FILING SYSTEM	VISICALC	TEACHING SPREADSHEET PROGRAM
12.	0415	ADVANCED BASIC	ASSIGNMENTS	
13.	0422	MICRO FOR WORD PROCESSING	BANK STREET WRITER	LEARN BANK STREET, A WORD PROCESSOR
14.	0424	MICROCOMPUTER LITERACY	VARIOUS	INTRO TO MICROCOMPUTING FOR CSEA
15.	1112	AGRICULTURE ORIENTATION	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
16.	1234	LANDSCAPE DEVELOPMENT I	VISICALC	LANDSCAPE COST ESTIMATES
17.	1235	LANDSCAPE DEVELOPMENT II	VISICALC	LANDSCAPE COST ESTIMATES
18.	1320	LIVESTOCK PRODUCTION	INTRO TO APPLE COMP.	
19.	1320	LIVESTOCK PRODUCTION	ANIMAL HUSBAND TERMS	TESTS STUDENT'S VOCABULARY
20.	1325	DAIRY HERD MANAGEMENT	BEAU HERDSMACHINE	PRODUCT. REPROD. MASTITIS OF HERD
21.	1325	DAIRY HERD MANAGEMENT	FILE CABINET	TEACHES DATABASE PROGRAM
22.	1325	DAIRY HERD MANAGEMENT	SPREADSHEET 2.0	TEACHES SPREADSHEET MODELING
23.	1325	DAIRY HERD MANAGEMENT	PIERSON SQUARE PROG	BALANCE PROTEIN IN FEED RATIONS
24.	1354	DAIRY NUTRITION LAB	RATION ANALYSIS	ANALYZE 24 HOUR FOOD OF DAIRY COW
25.	1520	FARM MANAGEMENT	LIVESTOCK PRODUCTION	
26.	1540	FARM FINANCE	VISICALC	FINANCIAL MODELING
27.	1540	FARM FINANCE	ANNUAL % RATE	COST OF LOANS ETC.
28.	1540	FARM FINANCE	LIVESTOCK PRODUCTION	
29.	1540	FARM FINANCE	REAL ESTATE ANALYSIS	
30.	1600	VET SCI ORIENTATION	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
31.	1634	INTRO VET SCIENCE	POSOLOGY	COMPUTE ANIMAL DRUG DOSES
32.	1652	CLIN LAB TECH LAB	DATA ANALYSIS	
33.	1652	CLIN LAB TECH LAB	GRADING	GRADING ANIMALS (?) AND/OR STUDENTS
34.	1656	VETERINARY ANIMAL NURSING	PHARMACY INVENTORY	INVENTORY AND CONTROL MEDICAL DRUGS
35.	1657	INTRO RES ANIMAL TECH	NUTRITION ANIMAL	PREPARE ANIMAL FEEDS
36.	1657	INTRO RES ANIMAL TECH	VOCABULARY	TEACHES TECHNICAL VOCABULARY
37.	1657	INTRO RES ANIMAL TECH	HEREDITY DOG	TEACHES GENETICS AND PROBABILITY
38.	1658	APP RES ANIMAL TECH	INVENTORY ANI & FEED	
39.	1658	APP RES ANIMAL TECH	DATA ANALYSIS	
40.	1658	APP RES ANIMAL TECH	WORD PROCESSING	WRITTEN PAPERS
41.	1658	APP RES ANIMAL TECH	APL APPLICATIONS	ABOUT 25 PROGRAMS
42.	1658	APP RES ANIMAL TECH	BMDP STATISTICS	
43.	1659	PROC IN LAB ANIMAL SCI	BREEDING	KEEP GENETIC RECORDS OF LAB ANIMALS
44.	1659	PROC IN LAB ANIMAL SCI	TOXIOLOGY	LEARN THE EFFECTS OF DRUGS
45.	1922	SPECIAL PROBLEMS 1	BASIC PROGRAMMING	LEARNING TO WRITE PROGRAMS IN BASIC
46.	2131	ACCOUNTING II	ACCOUNTING PRACTICE	GENERATES FINANCIAL STATEMENTS
47.	2224	LABOR-MANAGEMENT RELAT.	COL. BARGAINING	SIMULATES COLLECTIVE BARGAINING
48.	2320	PRINCIPLES OF MARKETING	MARKETING STUDY DISK	DRILL & PRACTICE REVIEW OF TEXTBOOK
49.	2404	OFFICE MACHINES	BANK STREET WRITER	PRACTICE ON A MICRO WORD PROCESSOR
50.	2404	OFFICE MACHINES	PAYROLL	PRACTICE W/A COMPUTERIZED PAYROLL
51.	2439	EXEC SECTY PRACTICE	DEPRECIATION I	TEACHES REPORTS & PROCESSING DATA
52.	2439	EXEC SECTY PRACTICE	DEPRECIATION II	TEACHES REPORTS & PROCESSING DATA
53.	2439	EXEC. SECTY PRACTICE	WANG WORD PROCESSOR	LEARN WORD PROCESSING
54.	2440	OFFICE PRAC & PROCEDURES	DEPRECIATION I	TEACHES REPORTS AND PROCESSING DATA
55.	2440	OFFICE PRAC & PROCEDURES	WANG WORD PROCESSOR	LEARN WORD PROCESSING
56.	2441	SECRETARIAL PROC.& PRACT.	VISICALC	SHOW USE OF SPREADSHEET IN BUSINESS

	NUM.	COURSE NAME	PROGRAM NAME	COMMENTS
57.	2441	SECRETARIAL PROC.& PRACT.	RIGHT RESUME WRITER	TEACHES RESUME WRITING
58.	2441	SECRETARIAL PROC.& PRACT.	APPLEPLOT	USE TO PLOT BUSINESS GRAPHICS
59.	2443	MODEL OFFICE LABORATORY	WANG WORD PROCESSOR	TEACH WORD PROCESSING
60.	2445	LEGAL SECTY PRACTICE	WANG WORD PROCESSOR	LEARN WORD PROCESSING
61.	2449	WP INFORMATION MANAGEMENT	INTRO TO MICROS	SHOW MICROCOMPUTER CAPABILITY
62.	2449	WP INFORMATION MANAGEMENT	BANK STREET WRITER	PRACTICE ON A MICRO WORD PROCESSOR
63.	2520	PRIN. OF DATA PROCESSING	DPOUTPUT	EXAMPLES OF REPORT FORMATS
64.	2520	PRIN. OF DATA PROCESSING	INFLATION	COMPUTES INFLATION TO YEAR 2000
65.	2520	PRIN. OF DATA PROCESSING	DPINPUT	TEACHES USE OF MAINFRAME COMPUTER
66.	2520	PRIN. OF DATA PROCESSING	TEN PROGRAMMING PROJ	TEACHES 'BASIC' PROGRAMMING LANG.
67.	2520	PRIN. OF DATA PROCESSING	DIPINFLO	INFLATION APPLICATION ON MAINFRAME
68.	2521	BASIC PROGRAMMING	MANY	TEACHES THE LANGUAGE 'BASIC'
69.	2600	SYSTEM ANALYSIS METHODS	LOTUS 1-2-3	USE OF INTEGRATED SOFTWARE PACKAGE
70.	2600	SYSTEM ANALYSIS METHODS		COMPUTER SYSTEM DEVELOPMENT
71.	2601	INTRO COBOL PROGRAMMING	VARIOUS	TEACHING COBOL PROGRAMMING LANGUAGE
72.	2622	BUSINESS COMMUNICATIONS	WORD PROCESSING	
73.	2901	MANAGEMENT SEMINAR	TEMPOMATIC IV	BUSINESS SIMULATION PROGRAM
74.	2901	MANAGEMENT SEMINAR	DECIDE, BUS. SIMUL.	TEACHES MANAGEMENT DECISIONS
75.	3121	ENG. MATERIALS & METHODS	A.C.I. MIX	COMPUTES CONCRETE MIXTURES
76.	3201	ARCHITECTURAL DRAWING I	CAD SYSTEM	BUILDING SECTIONS
77.	3202	ARCHITECTURAL DRAWING II	CAD SYSTEM	SCHEDULES AND DETAILS
78.	3203	ARCHITECTURAL DRAWING III	CAD SYSTEM	SCHEDULES, DETAILS & SPECIFICATIONS
79.	3212	ARCH. GRAPHICS I	CAD SYSTEM	INTRO TO COMPUTER ASSISTED DESIGN
80.	3220	MECH EQUIP DRAWING	SEVERAL HEAT RELATED	HEAT LOSS BUILDINGS, WATER, EXPANS.
81.	3316	STRUC DES & CONCRETE TECH	VECTOR ANALYSIS	CALCULATES STRESS FOR TRUSSES
82.	3400	COMPUTER METHODS	12 ASSIGNMENTS	FORTRAN FOR ENGINEERING/OTHER STUD.
83.	3554	WATER & WASTE WATER TECH.	OPEN CHANNEL FLOW	COMPUTES FLOW THROUGH VARIOUS CHANS
84.	3600	INTRO TO COMPUTER BASICS	VARIOUS	INTRO TO FIELD OF COMPUTER SCIENCE
85.	3601	COMPUTER SCIENCE FORTRAN	12 ASSIGNMENTS	TEACH PROGRAMMING IN FORTRAN
86.	3605	COMPUTER SCIENCE	VARIOUS	TEACH PASCAL, APL, BASIC LANGUAGES
87.	3610	DATA STRUCTURES	VARIOUS	STRUCTURES - ARRAYS, LISTS, TREES ETC
88.	3615	ASSEMBLY PROGRAMMING	VARIOUS	
89.	3620	COMPUTER GRAPHICS	CAD SYSTEM	FULL COURSE ON COMPUTER GRAPHICS
90.	3731	ELECT & ELECT CONTROLS	MOTOR, SERIES & PAR.	SOLVING COMPLEX CIRCUIT EQUATIONS
91.	3741	MECHANICAL EQUIPMENT	SEVERAL HEAT RELATED	HEAT LOSS BUILDINGS, WATER, EXPANS.
92.	3742	PLANT FAC & MAINT	OSCAR	MATERIAL HANDLING - USING ROBOT
93.	3801	INDUSTRIAL PROCESS I	STUDENT WRITTEN	PROGRAMS FOR MATERIAL LOADS & COSTS
94.	3801	INDUSTRIAL PROCESSES	OSCAR	MATERIAL HANDLING - USING ROBOT
95.	3805	ROBOTICS	MINI-MOVER	LEARN HOW TO PROGRAM A ROBOT
96.	3805	ROBOTICS	OSCAR	LEARN HOW TO PROGRAM A ROBOT
97.	3982	INDEPENDENT STUDY	CAD SYSTEM	TERM PROJECTS
98.	3990	INTRO TO TECHNOLOGY	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
99.	4151	FOODS II	SELLING PRICE TREE	CREATE MENU SELLING PRICE TREE
100.	4151	FOODS II	SELLING PRICE	COMPUTE MENU SELLING PRICE YIELD
101.	4162	REST MGMT & OPERATIONS	PROG NCR CASH REGIST	PROG & USE PROGRAMMABLE CASH REGIST
102.	4171	MENU PLANNING	MENU FORMULAS	COMPUTER MENU PLAN, COST AMOUNT ETC
103.	4361	SUP. GROWTH & MANAGEMENT	CRASE	SIMULATES RESTAURANT MANAGEMENT
104.	4453	FRNT OFF MGMT & ACCOUNT.	HOTEL RESERVATIONS	TEACHES COMPUTERIZED RESERVATIONS
105.	5062	HEATING LABORATORY	HEAT LOSS	HANDS-ON EXPERIENCE BUILDING HEAT
106.	5074	REF & AIR COND LECT II	COMP CAPACITY BTU'S	USED TO CHECK STUDENT WORK
107.	5099	MGNT OF WELDING SHOP	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
108.	5099	MGMT OF WELDING SHOP	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
109.	5101	ARC WELDING LECTURE	AWS ELECT. CLASSIF.	AWS ELECTRODE CLASSIFICATION
110.	5101	ARC WELDING LECTURE	ELECTRODE CLASS. 1&2	TEACHES ELECTRODE CLASSIFICATIONS
111.	5118	BLUEPRINT READING WELDING	BLUEPRINT DRILL	
112.	5380	INTRO DRAFT/LAYOUT TEC	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING

NUM.	COURSE NAME	PROGRAM NAME	COMMENTS
113. 5381	TOL/THREAD CONST	CAD SYSTEM	COMPUTER ASSISTED DESIGN
114. 5383	DRAW/ASSY & DETAIL	CAD SYSTEM	COMPUTER ASSISTED DESIGN
115. 5385	WELD & PIPE DRAWINGS	CAD SYSTEM	COMPUTER ASSISTED DESIGN
116. 5387	ELECTRO-MECH DRAWINGS	CAD SYSTEM	COMPUTER ASSISTED DESIGN
117. 5389	INT & DEVEL/PICTORIAL	CAD SYSTEM	COMPUTER ASSISTED DESIGN
118. 5392	ENERGY CONST & INSULATION	HEAT LOSS TOTAL	DOES COMPLEX CALC. ON BUILDING LOSS
119. 5401	INTRO E-M DRAFT & DESIGN	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
120. 5407	ELEC-MECH DRAFT & DES. II	CAD SYSTEM	COMPUTER ASSISTED DESIGN
121. 5408	READ & INT ELECTR DIAGRS	CAD SYSTEM	COMPUTER ASSISTED DESIGN
122. 5409	ELECT-MECH DRFT & DES III	CAD SYSTEM	COMPUTER ASSISTED DESIGN
123. 7000	ORIENTATION	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
124. 7002	CAREER DEVELOPMENT	RIGHT RESUME WRITER	TEACHES RESUME WRITING
125. 7002	CAREER DEVELOPMENT	ART OF INTERVIEWING	TEACHES HOW TO INTERVIEW FOR A JOB
126. 7002	CAREER DEVELOPMENT	FILLING OUT JOB APL.	HOW TO FILL OUT JOB APPLICATIONS
127. 9000	LIB. ARTS ORIENTATION	ORIENTATION EXERCISE	INTRODUCTION TO COMPUTING
128. 9005	COLLEGE SKILLS	BANK STREET WRITER	WRITING AND CORRECTING COMPOSITIONS
129. 9121	FRESHMAN ENGLISH	BANK STREET WRITER	WRITING AND CORRECTING COMPOSITIONS
130. 9122	ADVANCED COMPOSITION	BANK STREET WRITER	WRITING AND CORRECTING COMPOSITIONS
131. 9202	COLLEGE ALGEBRA	RANDOM NUMBER	PROVIDES SETS OF RANDOM NUMBERS
132. 9202	COLLEGE ALGEBRA	SYSTEMS LINEAR EQS.	SOLVING SIMULTANEOUS EQUATIONS
133. 9202	COLLEGE ALGEBRA	ALGEBRA	FUNCTIONS, GRAPHING, & COMPUTER USE
134. 9202	COLLEGE ALGEBRA	MATRIX METHOD	SOLVES SIMULTANEOUS EQUATIONS
135. 9202	COLLEGE ALGEBRA	QUADRATIC EQUATIONS	SOLVING QUADRATIC EQUATIONS
136. 9202	COLLEGE ALGEBRA	SECANT METHOD	SOLVES HIGHER DEGREE EQUATIONS
137. 9202	COLLEGE ALGEBRA	LINEAR EQUATIONS	SOLVING LINEAR EQUATIONS
138. 9202	COLLEGE ALGEBRA	FUNCTION GRAPHER	GRAPHS FUNCTIONS
139. 9205	CALCULUS I	SEVERAL DEMOS	GRAPHS AREA UNDER FUNCTIONS ETC.
140. 9205	CALCULUS I	TRAPEZOIDAL RULE	NUMERICAL INTEGRATION
141. 9205	CALCULUS I	SIMPSON'S RULE	NUMERICAL INTEGRATION
142. 9205	CALCULUS I	RIEMANN RULE	DEMONSTRATES DEFINITE INTEGRAL
143. 9205	CALCULUS I	LIMIT DEMONSTRATION	
144. 9206	CALCULUS II	GENERAL POLAR	GRAPHS IN POLAR COORDINATES
145. 9206	CALCULUS II	FUNCTION GRAPHER	GRAPHS FUNCTIONS
146. 9206	CALCULUS II	GEOMETRIC PLOTTER	GRAPHS GEOMETRIC EQUATIONS
147. 9206	CALCULUS II	NEWTON'S METHOD	SOLVES TRANSCENDENTAL EQUATIONS
148. 9207	CALCULUS III	BUDGE-BOBAK	GRAPHS AND ROTATES 3D FUNCTIONS
149. 9212	FINITE MATHEMATICS	BASIC PROGRAMMING	STUDENTS WRITE 10 SHORT PROGRAMS
150. 9222	STATISTICS	CHI SQUARE	GIVES EXPERIENCE WITH BURROUGHS
151. 9222	STATISTICS	HSD STATS	TEACHES COMPLEX STATISTICAL METHODS
152. 9222	STATISTICS	STATISTICS 3.0	TEACHES COMPLEX STATISTICAL METHODS
153. 9405	HUMAN GENETICS	THE GENE MACHINE	
154. 9405	HUMAN GENETICS	GENETICS	DRILL & PRACTICE ON GENETICS
155. 9408	ENTOMOLOGY	ORDER HOMOPTERA	TEACHES PLANT FEEDING INSECTS
156. 9408	ENTOMOLOGY	ORDER HEMIPTERA	TEACHES BUGS
157. 9408	ENTOMOLOGY	COLEOPTERA II	
158. 9408	ENTOMOLOGY	ORDER COLEOPTERA	
159. 9408	ENTOMOLOGY	HEMIPTERA II	TEACHES BUGS II
160. 9408	ENTOMOLOGY	ARTHROPODA II	CHARACTERISTICS OF INVERTEBRATES II
161. 9408	ENTOMOLOGY	HOMOPTERA II	TEACHES PLANT FEEDING INSECTS II
162. 9408	ENTOMOLOGY	ARTHROPODA	CHARACTERISTICS OF INVERTEBRATES
163. 9408	ENTOMOLOGY	TEST/EXTERNAL ANATMY	TEST ON THE EXTERNAL ANATOMY
164. 9408	ENTOMOLOGY	INSECT ANATOMY EXT.	TEACHES EXTERNAL ANATOMY OF INSECTS
165. 9410	HUMAN ECOLOGY	BANK STREET WRITER	WRITING AND CORRECTING COMPOSITIONS
166. 9411	GENERAL BIOLOGY I	DNA	
167. 9431	HUMAN ANAT & PHYS	COMPUTER AIDED LEARN	TEACHES TECHNICAL TERMS ETC.
168. 9434	HUMAN ANAT & PHYS I	MICROTEST	TEST/QUIZ GENERATOR FOR FACULTY

NUM.	COURSE NAME	PROGRAM NAME	COMMENTS
169. 9434	HUMAN ANAT & PHYS I	A & P I - SET 2	DRILL TO REVIEW PARTS OF THE BODY
170. 9434	HUMAN ANAT & PHYS I	A & P I - SET 3	DRILL TO REVIEW PARTS OF THE BODY
171. 9434	HUMAN ANAT & PHYS I	A & P I - SET 1	DRILL TO REVIEW PARTS OF THE BODY
172. 9434	HUMAN ANAT & PHYS I	OSMOSIS	DRILL OF OSMOSIS & DIFFUSION
173. 9435	HUMAN ANAT & PHYS II	A & P II	DRILL TO REVIEW PARTS OF THE BODY
174. 9445	FIELD NATURAL HISTORY	FOREST ANALYSIS	HELPS STUDENTS TO ANALYZE A FOREST
175. 9521	GENERAL PHYSICS I	ENERGY EFFICIENCY	HEAT LOSS FROM BUILDINGS R FACTORS
176. 9545	PHYSICS I (ENGINEERING)	CALORIMETRY	ILLUSTRATES HEAT LOSS = HEAT GAIN
177. 9545	PHYSICS I	YELLOW LIGHT	TEACHES ACCELERATION & DECELERATION
178. 9546	PHYSICS II (ENGINEERING)	ELECT & MAGNETISM	DRILLS ON SEVEN TOPICS
179. 9547	PHYSICS III (ENGINEERING)	ORBITS	MOTION IN INVERSE SQUARE FORCE
180. 9547	PHYSICS III (ENGINEERING)	MAXWELL	COMPUTES MAXWELL'S DISTRIBUTION LAW
181. 9547	PHYSICS III (ENGINEERING)	SCHROEDINGER	FINDS & PLOTS SCHROEDINGER PROBLEMS
182. 9547	PHYSICS III (ENGINEERING)	RADIO SERIES GRAPH	SHOWS RADIOACTIVE GROWTH & DECAY
183. 9547	PHYSICS III (ENGINEERING)	TABLE 1-2	SHOWS NUMERICAL INTEGRATION
184. 9547	PHYSICS III (ENGINEERING)	RADLAWS	COMPARES THREE RADIATION LAWS
185. 9547	PHYSICS III (ENGINEERING)	AAA RADIOACTIVITY	FANCY RADIOACTIVE DECAY PROGRAM
186. 9547	PHYSICS III (ENGINEERING)	RELCOR	COMPUTES RELATIVISTIC CORRECTIONS
187. 9547	PHYSICS III (ENGINEERING)	RADIOACTIVITY	SHOWS RADIOACTIVITY IS STATISTICAL
188. 9550	ASTRONOMY	ORBITS	MOTION IN INVERSE SQUARE FORCE
189. 9556	PHYSICAL SCIENCE I	ENERGY EFFICIENCY	HEAT LOSS FROM BUILDINGS R FACTORS
190. 9556	PHYSICAL SCIENCE I	ORBITS	MOTION IN INVERSE SQUARE FORCE
191. 9557	PHYSICAL SCIENCE II	PREPREPARED PROGRAM	STUDENTS GET HANDS-ON EXPERIENCE
192. 9621	HISTORY OF WESTERN CIV I	MICROTEST	TEST/QUIZ GENERATOR FOR THE FACULTY
193. 9660	INTRO PSYCHOLOGY I	PROGRAMMING ASSIGNS	OPTIONAL PROGRAMMING EXPERIENCE
194. 9660	INTRO PSYCHOLOGY	SEVERAL DEMOS	INTERACTIVE 'CONVERSATIONS'
195. 9661	INTRO PSYCHOLOGY II	INDIVIDUAL PROJECTS	DEVELOP PSYCHOLOGY APPLICATIONS
196. 9680	INTRODUCTION TO SOCIOLOGY	CLEAR	DRILL & PRACTICE REVIEW OF TEXTBOOK

State University
AGRICULTURAL AND TECHNICAL COLLEGE
Delhi, New York 13753

LEARNING RESOURCES PLANNING SURVEY

Introduction

The College has initiated several major planning efforts in recent years including Academic Program Reviews and the Multi-Phase Rolling Plan. The emphasis in these efforts was to base future plans and improvements in academic programs on a sound, thorough review of mission and performance. They have also provided important information used in reorganizing campus functions and managing scarce resources.

The Learning Resources Program was organized two years ago by unifying the administration of the Library, Instructional Resource Center, and Print Shop. This survey is designed to provide planning information based upon the interests and needs of the professional staff who use Learning Resources services in the instructional process. It is critically important that this survey elicit the frank and considered responses of users. To that end, we ask your cooperation.

Instructions (Parts I, II, III)

This survey is designed to determine which Learning Resources are most essential to support your instructional activities. Please circle the letter which best describes the importance of each resource to your needs.

1 = Essential
2 = Very Important
3 = Somewhat Important
4 = Not Important

Examples are provided to describe resources/services. More complete descriptions are contained in the 1982 Edition of the Learning Resources Directory which has been distributed to faculty and is available from Bill Van Wyck upon request.

Please return the completed survey to Bill Van Wyck, Bush 302, by April 29.

Thank you.

PART I

Library	Essential	Very Important	Somewhat Important	Not Important
Audiovisual Materials (films, slides, records)	1	2	3	4
Baker and Taylor Approval Program	1	2	3	4
Bibliographic Services	1	2	3	4
Data Base Services (ERIC, Psychological Abstracts)	1	2	3	4
Exhibit Service	1	2	3	4
Interlibrary Loan (including SCRLC Media Directory)	1	2	3	4
Acquisitions	1	2	3	4
Division Bibliographers	1	2	3	4
Library Orientation	1	2	3	4
Library Instruction (including the workbook)	1	2	3	4
Library Reserve	1	2	3	4
Reference Services	1	2	3	4
U.S. Government Documents	1	2	3	4

How can any of the above resources be improved?

PART II

Instruction Resource Center	Essential	Very Important	Somewhat Important	Not Important
Art and Design (art work, illustrations)	1	2	3	4
Audio Duplication (multiple copies, record to tape)	1	2	3	4
Audio Recording	1	2	3	4
Audiovisual Equipment Distribution	1	2	3	4
Audiovisual Equipment Loan (for off-campus use)	1	2	3	4
Audiovisual Supplies Distribution (tapes, cassettes, lamps)	1	2	3	4
Darkroom Facilities (Sanford 18)	1	2	3	4
Engraved Signs	1	2	3	4
Graphics Production (mounting and/or laminating)	1	2	3	4
Materials Selection Assistance	1	2	3	4
Media In-Service Workshops	1	2	3	4
Media Production Center (Evenden 124)	1	2	3	4
Photography (B&W prints--2"x2" slides for instructional applications)	1	2	3	4
Preview Facilities (Evenden 14)	1	2	3	4
Repair/Maintenance	1	2	3	4
Signs, Charts, Posters	1	2	3	4
Television Production Services	1	2	3	4
Off-air Taping Services	1	2	3	4
Circulation of Videocassette Playback and Monitors	1	2	3	4
Transparency Production	1	2	3	4
Copyright Advice	1	2	3	4

How can any of these resources be improved?

PART III

Printing and Duplicating Services	Essential	Very Important	Somewhat Important	Not Important
Advice on Costs, Assembly of Publications, etc.	1	2	3	4
Collating and Binding	1	2	3	4
Offset Printing	1	2	3	4
Typesetting	1	2	3	4
Platemaking	1	2	3	4
Campus Mailings	1	2	3	4

How can any of the above resources be improved?

PART IV

Academic Computing

Indicate your use(s) of Academic Computing this year. Rank: (1) most used; (2) some use; (3) not used.

Course content development _____
Student assignments _____
Professional research/coursework _____
Test scoring _____
Performance evaluation _____
Other _____ _____

Indicate the hardware you use. Rank: (1) most used; (2) some use; (3) not used.

Burroughs Terminals _____
Apples _____
APL Terminals (Binghamton) _____
Keypunches/Card processed _____
Other _____ _____

Indicate the software you use. Check all that apply.

Burroughs CANDE ( ) BASIC ( ) Fortran ( ) COBOL ( )
Apple BASIC ( ) Fortran ( ) Pascal ( )
APL Terminals APL ( ) Binghamton Libraries ( )
Commercial Applications Software ( )
Personally Developed Software ( )
Other _____ ( )

Indicate the factors affecting your computer work.
Rank: (1) greatly aided; (2) helpful; (3) hindered.

Apple availability _____
Burroughs terminal availability _____
APL terminal availability _____
Card processing turnaround _____
Burroughs response time _____
Academic Computing staff assistance _____
Burroughs down time _____
Other _____ _____

Indicate areas for improvement.
Rate: (1) Very high need; (2) some need; (3) low need.

User Instructions/Manuals	_____
Weekend Lab hours	_____
Terminal response times	_____
Computer down time	_____
Library materials	_____
Information on available campus software	_____
Technical assistance in Lab	_____
Programming/Systems Assistance	_____
Software applications information	_____
Division orientations (student)	_____
Text editing capability(faculty/student)	_____
Introductory Workshops for faculty (Pascal, BASIC, Fortran)	_____
Advanced applications Workshops	_____
Others _____	_____

Comments:

MSP - 4/83

State University
AGRICULTURAL AND TECHNICAL COLLEGE
Delhi, New York

APPENDIX E

Academic Computing Student Survey

In order to improve Academic Computing Services, the Learning Resources Program staff asks that you answer the following questions as accurately as possible and return this form to the Learning Resources Office, Bush 302, or to the proctor in the Academic Computing Lab.

Please read the instructions for each question very carefully. Thank you.

1. For which course(s) are you now using the Lab? (check)

Computer Methods	_____
Intrc to Data Processing	_____
Accounting	_____
Math	_____
Mechanical Equipment	_____
Biology	_____
Other	_____

2. What hardware do you use? Rank of order of use: (1) Used Most; (2) Used Some; (3) Not Used.

Burroughs Terminals	_____
Apples	_____
APL Terminals (Binghamton)	_____
Keypunches (card processed)	_____

3. How much time do you use the following? Indicate: (1) Less than 1 hr./wk; (2) 1-2 hrs./wk; (3) 3-5 hrs./wk; (4) 5 or more hrs./wk.

Burroughs Terminals	_____
Apples	_____
APL Terminals	_____
Keypunches	_____

4. How can Academic Computing Services be improved? Rate each: (1) Very High Need; (2) Moderate Need; (3) Very Low Need.

Student Orientation to Hardware	_____
Terminal Availability	_____
Apple Availability	_____
Better Terminal Response Time	_____
User Instructions/Manuals	_____
Less Computer Down Time	_____
More Lab Hours	_____
Quicker Punched Card Processing	_____
Keypunch Availability	_____
Library Materials	_____
Proctor Assistance in Lab	_____
Other _____	_____

Comments:

APPENDIX F

State University of New York
AGRICULTURAL AND TECHNICAL COLLEGE
Delhi, New York 13753

Academic Computing in the Two-Year College
June 11-12, 1984

CONFERENCE EVALUATION

Summary

The State University of New York Agricultural and Technical College at Delhi presented a conference titled "Academic Computing in the Two-Year College" on June 11-12, 1984. The purpose of the conference was to disseminate to other practitioners the results of Delhi's recently completed three-year project to improve academic computing on its campus. That project was funded, in large part, by a $250,000 National Science Foundation CAUSE grant.

The conference was attended by forty-eight (48) individuals representing twenty-five (25) public and private educational institutions and agencies in New York, Connecticut, and Michigan. Three-fourths of those who attended were faculty and the remainder a mixture of administrators and other non-teaching staff, such as academic programmers and technicians. Approximately one in five has been involved in computing less than one year and a liké number for more than five years. A majority of those in attendance has been in computing from one to five years.

The conference program consisted of major presentations and tutorials by Delhi faculty and staff supplemented by grant project consultants and invited guests and a midway of faculty and college hardware and software. Vendors were not involved The conference program is attached (A).

An evaluation questionnaire (Attachment B) was distributed in each registration packet. Twenty-eight (28) responses were received for a return of 58%.

From the response ratings (Table I), it can be concluded that the individual sessions were well-received by respondents. The hardware/software midway (Potpourri), in particular, was rated high in quality by respondent consensus. The overall conference was rated above average.

Respondents rated conference meals, hospitality, and materials well above average (Table II).

Respondent comments are contained in Attachment C.

Prepared by Mark S. Peel
August 1, 1984

TABLE I

Conference Sessions

	Session Name	N	Mean	Standard Deviation
1.	Computer Literacy through the Mathematics Curriculum	12	3.67	0.65
2.	Text-Editing/WP for Students	15	2.80	0.86
3.	Techniques/Approaches to Teaching Computer Languages	14	3.57	1.16
4.	CAMELOT	13	4.39	0.77
5.	Computers in the Science Lab	14	4.21	1.12
6.	An Office Automation Model in the Secretarial Curriculum	5	4.40	0.89
7.	Introduction to Micro-CAD	12	3.92	1.00
8.	Potpourri	25	4.44	0.65
9.	Computer Assisted Instruction for Biomedical Problems	6	3.83	0.41
10.	Critical Issues in the Development of Academic Computing Plans	20	4.40	0.60
11.	Integrating the Use of Micros in the College Math Classroom	4	3.75	0.96
12.	Computing Applications in Physics/Astronomy	7	3.57	1.27
13.	Prepackaged Computerized Test Banks	19	2.95	1.08
14.	Micros in the Continuing Education of Nurses	5	3.40	1.14
15.	The Future Electronic Campus	21	3.91	0.94
16.	Electrical/Mechanical Software Applications for Building Construction	15	3.20	0.86
17.	Simulation Exercise in Restaurant Management	16	4.25	0.86
18.	Student Orientation to Academic Computing	17	3.59	1.00
19.	Overall Conference	25	4.08	0.64

NOTE: The following scale was used to rate the quality of each session:

High Average Low

5 4 3 2 1

TABLE II

Conference Services

N=28

		#	%
1.	How did you hear about this conference?		
	1) Conference announcement, i.e. flyer or brochure	21	75
	2) Announcement in a journal/newspaper	--	--
	3) Word of mouth	4	14
	4) Other	--	--

	Please rate the following:	N	Mean	Standard Deviation
2.	Conference Housing	23	3.22	0.90
3.	Meals	24	4.75	0.53
4.	Hospitality	26	4.69	0.47
5.	Materials	28	4.57	0.50

NOTE: The following scale was used to rate the quality of items 2 - 5:

Excellent		Average		Inadequate
5	4	3	2	1

ATTACHMENT A

STATE UNIVERSITY
AGRICULTURAL AND TECHNICAL COLLEGE
DELHI, NEW YORK 13753

ACADEMIC COMPUTING IN THE TWO-YEAR COLLEGE

JUNE 11-12, 1984

CONFERENCE SCHEDULE

MONDAY, JUNE 11

9:00 a.m.	REGISTRATION . . . . . (Coffee/Pastry Available)	Bush Hall Lower Lobby
10:00-10:15 a.m.	OPENING SESSION - WELCOME . . .	301-302 Evenden
	Dr. Mark Peel, Program Coordinator President Seldon Kruger, SUNY Delhi	
10:30-12 noon	CONCURRENT SESSIONS	

I. Computer Literacy through the Mathematics Curriculum: A Model . . . . . 301-302 Evenden

Dr. Dennis Callas, Assoc. Prof., Mathematics
Dr. David Hildreth, Prof., Mathematics

II. Text Editing/Word Processing for Students .. 304 Evenden

Jean Boland, Programmer/Analyst
William Stalter, Prof., Humanities

12 noon-1:00 p.m. LUNCHEON . . . . . MacDonald

1:00-2:30 p.m. CONCURRENT SESSIONS

I. Techniques and Approaches to Teaching Computer Languages . . . . . 304 Evenden

John Mallery, Prof., Engineering Science

II. Camelot: An Individualized Information System . 303 Evenden

Robert Albrecht, English Department, SUNY Ag. and Tech. College, Alfred
Terry Morgan, English, SUNY Alfred

2:15-3:00 p.m. Refreshments Available . . . . . 3rd floor Evenden

2:45-4:30 p.m. CONCURRENT SESSIONS

I. Computers in the Science Laboratory . . . . . 301-302 Evenden

Dr. Elisha Huggins, Prof., Physics, Dartmouth College

II. Concurrent Tutorials (prior registration required; repeat sessions Tuesday afternoon)

- An Office Automation Model in the Secretarial Curriculum . . . . . 22 Sanford Model Office

Rosalie Higgins, Assoc., Prof., Secretarial Science

- Introduction to Micro-CAD . . . . . 313 Bush Graphics Lab

James Johnson, Asst. Prof., Architectural Tech.
John Mallery, Prof., Engineering Science

5:00-6:00 p.m. HOSPITALITY HOUR . . . . . MacDonald

6:00-7:30 p.m. DINNER . . . . . MacDonald

7:30-10:00 p.m. POTPOURRI . . . . . Bush Hall Third Floor

Restaurant/Food Service Accounting	Welding
Microcomputer Loan Program	Biology
Veterinary Science	Math
Building Construction/Carpentry	Spreadsheet
Word Processing	Psychology
Collective Bargaining	Nursing
Corporate Simulation	Accounting
Public Domain Software	Agriculture

SOFTWARE SWAP

(Hardware includes Micro-CAD, Industrial CAD, Instructional Robotics, Restaurant Register)

7:00-10:00 p.m. HOSPITALITY SUITE . . . . . MacDonald

TUESDAY, JUNE 12

7:45-8:45 a.m. BREAKFAST . . . . . MacDonald

9:00-10:15 a.m. CONCURRENT SESSIONS

I. Computer-Assisted Instruction for Biomedical Problems . . . . . 304 Evenden

Dennis Baker, Prof., Veterinary Science Technology

II. Critical Issues in the Development of Academic Computing Plans . . . . . 303 Evenden

Dr. Dennis Callas, Assoc. Prof., Mathematics
Dr. Mark Peel, Asst. V.P., Academic Affairs

III. Concurrent Tutorial: Integrating the Use of Microcomputers in the College Mathematics Classroom . . . . . 305 Bush (Lab)

Dr. David Hildreth, Prof., Mathematics

10:15-11:15 a.m. Refreshments Available . . . . Evenden

10:30-12 noon CONCURRENT SESSIONS

I. Microcomputers in the Continuing Education of Nurses: A Three-Step Progression Model . 301-302 Evenden

Ray McKnight, Prof., Biology

II. Computing Applications in Physics/Astronomy..304 Evenden

(10:30-11:15) Dr. James Richards, Prof., Physical Sciences

III. Prepackaged Computerized Test Banks . . . . 303 Evenden

(11:15-12) Dr. Aleksandras Gedmintas, Asst. Prof., Social Science

---

12 noon-1:00 p.m. LUNCHEON . . . . . MacDonald

1:00-2:30 p.m. CONCURRENT SESSIONS

I. The Future Electronic Campus . . . . . 304 Evenden

Dr. Ronald Sarner, Assoc. Prof., Computer Science, SUNY College of Technology, Utica

II. Concurrent Tutorials (Prior registration; repeat sessions)

- An Office Automation Model in the Secretarial Curriculum . . . . . 22 Sanford

- Introduction to Micro-CAD . . . . . 313 Bush

2:15-3:15 p.m. Refreshments Available Evenden

2:45-4:30 p.m. THREE-IN-ONE SESSION 301-302 Evenden

Electrical and Mechanical Software Applications for Building Construction

John Hampel, Asst. Prof., Engineering Technologies

Simulation Exercise in Restaurant Management

Louis Tremonti, Assoc., Prof., Hotel, Restaurant, Food Service Management

John Magnuson, Prof., Management

Student Orientation to Academic Computing

Dr. James Richards, Prof., Physical Sciences

4:30 p.m. CLOSING SESSION 301=302 Evenden

CONFERENCE ACKNOWLEDGEMENTS

Potpourri:

Dennis Baker	James Johnson	Howard Reed
Jean Boland	Joel Kazmierski	James Richards
William Brosi	John Magnuson	Jack Rose
Donald Haight	John Mallery	Richard Smith
John Hampel	Ray McKnight	William Stalter
Richard Harrington	Charles Nichols	Louis Tremonti
David Hildreth	James Pruss	Robin Turner
Robert Hunt	Scott Purdy	

Conference Support:

Joan Newcomer, Lucile Frisbee, Steven McKee, Dawn Pomeroy, Betty Clark, Duke Piroha, Bob Bird, Bill VanWyck

ATTACHMENT B

STATE UNIVERSITY
AGRICULTURAL AND TECHNICAL COLLEGE
DELHI, NEW YORK

Academic Computing in the Two-Year College
June 11-12, 1984

Conference Evaluation

The Offices of Academic Affairs and Continuing Education request that you take a few minutes to complete this form. The results will be used in the planning of future conferences. Thank you.

A. Attendee Background (Circle 1)

1. Affiliation

1) Public institution
2) Private institution

2. Your Current Position (Circle 1)

1) Faculty
2) Administrator
3) Other _____

3. How long have you been involved in academic computing? (Circle 1)

1) Not involved to date
2) Some involvement; less than 1 year
3) 1-5 years
4) Over 5 years

B. Conference Sessions: How would you rate the quality of the following? (Circle 1 per item)

	High		Average		Low	Did Not Observe
1. Computer Literacy through the Mathematics Curriculum	6	5	4	3	2	1
2. Text-Editing/WP for Students	6	5	4	3	2	1
3. Techniques/Approaches to Teaching Computer Languages	6	5	4	3	2	1
4. CAMELOT	6	5	4	3	2	1
5. Computers in the Science Lab	6	5	4	3	2	1
6. An Office Automation Model in the Secretarial Curriculum	6	5	4	3	2	1
7. Introduction to Micro-CAD	6	5	4	3	2	1

		High		Average		Low	Did Not Observe
8.	Potpourri	6	5	4	3	2	1
9.	Computer Assisted Instruction for Biomedical Problems	6	5	4	3	2	1
10.	Critical Issues in the Development of Academic Computing Plans	6	5	4	3	2	1
11.	Integrating the Use of Micros in the College Math Classroom	6	5	4	3	2	1
12.	Computing Applications in Physics/Astronomy	6	5	4	3	2	1
13.	Prepackaged Computerized Test Banks	6	5	4	3	2	1
14.	Micros in the Continuing Education of Nurses	6	5	4	3	2	1
15.	The Future Electronic Campus	6	5	4	3	2	1
16.	Electrical/Mechanical Software Applications for Building Construction	6	5	4	3	2	1
17.	Simulation Exercise in Restaurant Management	6	5	4	3	2	1
18.	Student Orientation to Academic Computing	6	5	4	3	2	1
19.	Overall Conference	6	5	4	3	2	1

C. Conference Services

1. How did you hear about this conference?

   1) Conference announcement, i.e. flyer or brochure
   2) Announcement in a journal/newspaper
   3) Word of mouth
   4) Other_____

Please rate the following:	Excellent		Average		Inadequate
2. Conference Housing	5	4	3	2	1
3. Meals	5	4	3	2	1
4. Hospitality	5	4	3	2	1
5. Materials	5	4	3	2	1

Please give any comment that you care to make concerning any aspect of this conference.

COMMENTS

Very enjoyable opportunity to meet and share exciting ideas. Excellent food.

Very energetic and dynamic handling of a conference. Very enjoyable!

Very well organized. Most presentations well made and informative.

A special word of thanks to Dr. Mark Peel. He was very willing to help in many areas. It is the only computer conference that I attended that was worthwhile. In fact, there really is no comparison with the other conferences. I'm really glad I came. Thank you.

I would guess this conference was planned as a result of many negative conferences attended. I found very little in this endeavor for negative criticism. You have structured an excellent conference and are to be commended.

I am sure you were under subscribed - great for us but, I am sure, a disappointment to you.

I sincerely hope you will do this again. I would highly recommend attendance by all people I know in the field.

EXCELLENT.

Computers in the Science Lab was great - until he started Mac Fishing!

Very well-organized. Sessions attended by choice were, in the main, effective and productive for participant. Am evaluating at end of conference and feel my memory bank is overloaded.

THANKS.

SUNY College of Technology

September 19th, 1984

Dr. Mark S. Peel
Director of Academic Computing
SUNY Agricultural and Technical
College at Delhi
Delhi, New York 13753

Dear Mark,

It is with pleasure that I present my final report to you at the conclusion of my three-year consulting period. In my report to you a year ago, I commented upon the change I had observed on the Delhi campus over a short two-year time frame. The complete turn about on the campus, changing from a campus almost literally devoid of academic computing to one which fully integrated computers into the curriculum - and with enthusiasm on the part of the faculty was a truly remarkable accomplishment.

Now, one short year later, you sought to share what you learned from your experience with others, and hence you hosted a conference on computing in the two-year college. That most of the presentations were based upon experiences on your campus is the first tribute to the distance Delhi has traveled. Yet, to merely state that you held a conference, at which you could present your accomplishments does not do justice to you, your colleagues or to the conference. There are conferences and there are conferences. The good ones are truly beneficial to the participants, but most fall somewhere between useless and "the pits". To say that your conference falls into the first category hardly does justice. Enthusiasm on the part of panelists and the audience was overwhelming. Perhaps the greatest testimony was given by the participants themselves - at 10 o'clock at night, and absent refreshments of any kind, most of the conference participants were still in the exhibit area exchanging ideas, experiences and software. At the end of a fourteen hour day, people simply will not hang around unless they feel the experience is a valuable one. That image - of a hall full of people as the clock struck ten - captures the essence of the conference in my mind. I doubt I'll ever again see that kind of spirit and enthusiasm.

As you look back over the past three years, you and each of your colleagues should be secure in the knowledge that you succeeded admirably, that your sponsors received more than fair value, and that the entire Delhi campus community is much richer because of it.

An Upper Division College • State University of New York • 811 Court Street, Utica, New York 13502
An equal opportunity/affirmative action employer

Very truly yours,

Ron

Ronald Sarner,
Associate Professor and
Chairperson, Department
of Computer Science

Evalution of the Delhi CAUSE project

by: Elisha R. Huggins
Dartmouth College
Hanover, NH 03755

I was involved with the Delhi CAUSE project from the early stages and have been able to observe and evaluate its progress throughout. I have three main reactions.

1) The project more than met its stated goals.

2) The project had a significant impact on Delhi faculty, both in developing confidence with the use of computers, and in increasing their excitement for teaching in general.

3) The project was carried during a time of a major transition in educational computing from time sharing to microcomputers. During this transition, Delhi became one of the leaders, influencing other institutions (from community colleges to Dartmouth College).

In the past few months, a number of colleges have sent representatives to Dartmouth to find out how Dartmouth is handling the transition to microcomputers. In several cases, where the representatives were from small colleges, I have recommended that the representatives also visit Delhi as an example of how microcomputers can be used effectively on a small campus.

Elisha R. Huggins

ERIC CLEARINGHOUSE
FOR JUNIOR COLLEGES
AUGUST 30, 1985